Zen and the Art of Woodworking

An Honors Thesis (HONR 499)

By

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Signed

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Project overview

This creative thesis involved building convertible benches that were donated to the Honors House patio and a reflection paper contrasting artisan carpentry with mass produced furniture. Building the convertible benches was a focal task for the project and also served as a way to leave a legacy for future students. The tedious processes of crafting a practical and dynamic product also yielded introspective thoughts and memories that were recorded and later used to develop arguments. The Honors College encourages students to look at issues from different angles and investigate the roots of a particular perspective. The entire process of planning, acquiring materials, prototype testing, field research, and finished product was analyzed and used to support the thesis. Great efforts were made to produce a long-lasting artisan furniture product that could be utilized in several ways. The contrasting perspective was gained by interviewing a ready-to-assemble furniture producer and touring their facility to witness the build process. The result is a collection of ideas presented in a similar fashion to the book *"Zen and the Art of Motorcycle Maintenance,"* which was the inspiration for the project.

Abstract

In a world of industry, any need may be met by order or purchase of inexpensive, mass produced products. A simple bookcase is shipped across nations to its final destination with some assembly required by the end user. Furniture and other products that are mass produced are generally single user products to be utilized and discarded when out of fashion or when broken. There is another type of product that has a different life cycle. Artisan craftsmen create masterpieces of furniture and other objects. The end user manipulates the design or appearance to fit an individual need by refinishing or restoring surfaces. The price and level of quality is much higher on these artisan products. The product is utilized by many owners as it is passed down through families or sold with increasing value over time. Handcrafted products are repaired and restored when broken or heavily worn. In this comparison, the disposable, mass produced product along with the producer and end user will be compared with the meticulously crafted product of the carpenter and its end user. The objective of this project is to examine the difference in methodology and appreciation of two classes of the same product.

Acknowledgements

I would like to thank Dr. Timothy Berg for his guidance on this project and throughout my academic career at Ball State. He is my Zen master and has been a great mentor during my studies at the Honors College. He has taught me to look for the deeper connection in the world.

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I would like to thank Mr. Dan Sauder for his assistance in this project. His advice and wisdom in business and the history of his family business was instrumental in the development of this thesis.

I would like to thank my father for exposing me to his craft and beginning my journey in the trade of carpentry.

I would like to thank my mother for encouraging me to strive for academic excellence. It is her example of returning to academics as an adult that gave me the courage to persevere.

I would like to thank Dr. Jim Ruebel for accepting me as an honors student. It was his permission that allowed me to be a part of the Honors College. It was his support that encouraged me to take full advantage of the experience from start to finish.

Most of all, I would like to thank my wife Mandy for her encouragement, support, and love during my demanding academic and professional ventures.

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Introduction:

It was my first Honors College course at Ball State University that presented an idea that would later develop into a personal thesis project. The class met in a classroom at the Honors House that had previously been a garage. The weather was warm and skies were a clear blue. Unfortunately, all the windows were permanently shut and the air conditioning system was out of tune with the comfort of the space. Most of the students expressed a desire to move the class outside but were quickly turned away from the idea because of a lack of seating. This was a problem I knew I could solve given the permission and the right motivation. I had been trained as a carpenter and had run a business making unique furniture pieces along with small residential construction projects. It would have been simple to go and buy a bunch of outdoor furniture for the Honors House patio, but I wanted to leave a legacy of some kind. When it came time to choose a thesis project, I tried to think of a way to combine my trade skills and what I had learned in the honors program into a creative project. It only took a fair weather day to remember the desire to have class outside in the beautifully landscaped backyard. I began to read a book called *Zen and The Art of Motorcycle Maintenance* that summer and was immediately taken by the idea that a difference in perspective can have a nearly opposite effect on the choices made for any product. If this logic is applied to carpentry, a distinct difference can be analyzed between a market for hand-made furniture and mass produced furniture products.

Planning:

The chosen creative project was to make furniture for the patio at the Honors House. In the past I had designed a convertible bench for a client, the Gutierrez family, in

which I felt would be perfect for the application. It would allow the space to be used for recreation or instruction by converting from several picnic tables to enough bench seating to facilitate a typical honors discussion circle. The first challenge was to find the plans I made for the original project. The plans were incomplete and worn from use during the original build process. For most consumers, it would be easy to open a catalog and choose the pre-made furniture that matched the patio design the closest, but a sense of pride prevented such an easy escape. I settled for starting over on the plans using the concept of the original convertible bench. To make these unique, I added more rounded edges and a paint finish to match the Honors House. When the design phase was finished, I set out to make a prototype.

All of the planning that went into the project equates to a consumer looking through a catalog or browsing products in a showroom. Decisions are made based on function, style, colors available and cost. Not that it is a mindless process, but there is a limited involvement with the design of the product. The Zen aspect for the consumer is the carefree nature of buying pre-made products. You don't have to count fasteners or worry about the compatibility of materials. Someone else worries about the design details and the engineering. There is still choice, but it is more a choice between products that have all other calculations made previously. To find out more about what Zen really meant, I read a book entitled *Zen Culture*. The author gave a detailed history lesson of Zen and how it related to the daily lives of the Japanese people (even before there were considered Japanese.) Zen is an acceptance of the world as-is. It is a way of viewing the world as a powerless being and appreciating things as they are presented without trying to manipulate the outcome. Zen is more than just making easy choices in life. It is a way to

experience the world. To control and perfect everything is the opposite of Zen. With control and perfection comes anxiety that shortens life.

Traditions:

I was exposed to carpentry at a very young age. My father was trained by my great-grandfather to build stairs and finish home interiors with crafted wood trims. Growing up, I sometimes accompanied my dad to jobsites where he let me build stools out of his scraps. He slowly taught me to use different tools and to carefully measure and cut pieces to produce a more stable product. He taught me to look for select pieces without knots and curves that would make cutting and assembly easier. I learned to hold the hammer at the end for a more powerful strike and also learned to keep my fingers out of the way after a few sore thumbs. My brother is a few years older and learned the same lessons so we often competed for the best creation (he always won.) We both followed in our fathers' footsteps by joining the Building Trades program in high school. We would spend half of our junior and senior years building homes, barns and other residential structures as part of a student contractor team. We both completed a carpentry certification to become journeyman carpenters and spent years in the commercial field. I enjoyed the finish carpentry the most but quickly learned that it was only a small portion of the duties as a commercial carpenter. There would always be ditches to dig and heights to climb. Carpentry became my hobby and I would find ways to earn a living with my mind, instead of my back. I felt more satisfied taking my time on a piece of furniture and focusing on it rather than trying to meet production schedule.

Dan Sauder is the grandson of Erie Souder, founder of Sauder Woodworking, and is the Vice President of New Markets and Engineering. If the name sounds familiar, it is because Sauder is the second largest producer of ready-to-assemble furniture kits behind Ikea. Sauder furniture can be found at nearly all major U.S. retailers. They even produce some parts for Ikea because of their local U.S. facilities. Sauder is located in north western Ohio and I sent a message asking a few questions and requesting a facility tour. I received a quick reply from the administrator who directed me to Dan Sauder. Mr. Sauder offered a few hours for an interview and a personal tour. He gave me a brief history of the company and his grandfather's business development.

Erie Sauder was the proprietor of a small carpentry shop that employed a handful of local craftsmen to make church pews. He started as an artisan in 1934 and had a solid customer base. He despised waste and found a use for the scraps by making small corner tables from the leftover hardwood cut from the pew ends. As the story goes, in 1940 a travelling salesman was on his way from New York to Chicago to a furniture convention of sorts. His train stopped in Archbold, Ohio and he ate at the local diner. He noticed one of Erie's tables in the store and went to visit his shop. The sales man stated "I hear you're the man that makes tables?" Erie replied "No, I make pews." After some discussion, the salesman took the table with him to the trade show and later contacted Erie to join him in Chicago. Erie, with his wife in tow, reluctantly agreed to meet him and emerged with a purchase order for 25,000 tables. There were not enough scraps from his current operation to fill the order and the pew business was eventually separated from the furniture business. By 1950, a shift in marketing gave Erie the challenge to produce a more compact package for his tables and he produced the first ready-to-assemble table. It was

sold under the pretense that "even the misses can put it together" (consider the time period.) The products were reengineered and developed into the products similar to what is available now. Since the early 1980's the furniture has been mass produced using particle board with laminate or thin paper finishes to appear equal to solid wood furniture. The products were then marketed as inexpensive, attractive furniture that could be assembled at home using very few tools and requiring little or no skill. The current facility is over 4 million square feet and employs 2,000 workers. There are 30 different design collections with 750 different SKU's (products) and 8 million units produced and sold each year. The current challenges to the company are based mainly around innovation of design and expediting the manufacturing process.

The factory tour:

Dan Sauder made every effort to answer my barrage of occasionally very personal questions. He graciously offered the rich history of the company, his family and business theory in general. After our interview and office visit, he invited me to join him for a factory tour. The facility was impressive in size and in organization. As we entered and exited areas, he exchanged greetings and comments with workers as if they had worked side-by-side for years. The factory had the feel of an automotive production line but was extremely well planned and clean. Signage and lines outlined every area to instruct and guide the supply of material and labor to its proper place. Workers were casual and appeared to socialize easily while perform various small tasks. Massive single and multi-purpose machines cut and shaped the material while workers operated the levers and buttons that fed and released parts. A virtual hive of activity ran for three shifts a day slowing but never

stopping. At one point Dan offered a view from our golf-cart of an entire warehouse filled with stacks of particle board sheets and stated, "This is about 5 days-worth of material." My jaw hit the floor. He showed me the entire process from material delivery to packaging and explained the steps along the way. He gave me samples of the paper and edging used on a few of the pieces and offered knowledge of the machinery and lean manufacturing techniques. At the end of the day Dan summed it all up by stating "When it comes down to it, I just make squares with holes in them." It was a serious (and seriously funny) understatement about the amazing operation I had witnessed.

The artisans:

My wife and I have a pact that every year we would travel somewhere to celebrate our anniversary. One of those trips in particular was to northern Michigan. We stayed near Glen Arbor and walked the streets for an entire day visiting its small artisan shops. Some were decorated with unique crafts, some with paintings and others with plastic toys themed for the area. There were a few shops that I was intrigued by which included two furniture stores and a wood sculpture artisan shop. I spoke to one carpenter, Tom Clark, about what it took to produce his fine furniture. I was amazed at the beauty of his hand rubbed cherry dining set. I asked, "How long does it take to produce a single chair?" His reply was over 22 hours for the first and by the last one he had it down to 12 hours. The price tag reflected the time spent on the object and its fine quality. He volunteered other information about how most people cannot appreciate the work that went into making the set. I mentioned that I was a carpenter and a novice furniture maker but had not made a chair. It seems the chair is the ultimate in hand made furniture projects. It has to be

comfortable, stable and strong. The design of a chair usually consists of several smaller pieces, some curved, that must fit together tightly and hold up to continually shifting loads. I could sense the frustration in Tom that many people look and compliment, but few actually buy the furniture. It seems that he chose this profession for the joy of the work, not for fame or wealth. Tom had great pride in his work that I could relate to. When I looked at his furniture and the products of other artisans at Glen Arbor, I wanted to join them. Part of me wished I could pack up my family and belongings and move there. I could imagine spending long hours in a sawdust covered shop crafting and sculpting pieces to put on display. There is another side of this dream that is undeniable, wanting to provide for my family. I could not ask my wife and three young boys to struggle and starve while I enjoyed my artistry. These men and women were all retired or single with no children. I rested the dream to revive later when I was retired and the children were grown.

Materials:

The first consideration for the furniture build was material. There were a few plastic chairs available for use on the honors patio. They had been left out in the weather through rain, snow and hot direct sunlight. It was evident that these chairs were not used often but would still eventually break down from natural conditions. It posed a problem for choosing materials. Do I use treated lumber, naturally weather resistant cedar lumber or untreated lumber and focus on the coatings? A few factors helped decide which lumber was best suited for the application. A professor in my Construction Management program had a theory that quality, time, and cost were all related in any project...pick only two to focus on. It was true, if I chose Cedar it would handle weather better but would triple the cost, if I chose treated lumber it was cheaper but the paint finishes would not stick, if I chose

untreated lumber I would spend more time putting extra coats of paint to ensure it would last. Sacrificing quality was not an option so the material would have to either be more expensive or I would have to spend more time finishing it. I chose the latter. The best untreated material to use would be southern yellow pine because of its softer density, ability to hold paint coatings, and low expense.

The consumer:

The process begins with a consumer having a need and a contractor (or business) offering their services or product. For the contractor the design phase begins with a negotiation of the desired product, price and capability. For the business this phase is internal with the design of a selection of products the consumer may want. The consumer must choose the right contractor or business that will best produce the product. In artisan products, the carpenter may make suggestions to guide the consumer toward materials and designs that are either less expensive, more durable or better suited for the intended use. Businesses with mass produced products have to predict what the consumer will want or sell it to them with catchy advertising campaigns or colorful packaging. The basic need for furniture can be approached as a long term purchase at great expense or as an immediate solution for the need with lower cost products. Often, the economic situation of the consumer forces the choice between products. The least expensive solution is always the mass produced product. I have been one of those customers. There is still a particle board, self-assembled bookcase in my living room. I purchased it when I rented my first apartment back in 1999.

My cash flow was non-existent and I had help from family donating used furniture and buying the bookcase meant having the room filled and feeling more independent. I wanted real wood furniture but buying it would mean I had no money for anything else. The bookcase became a status symbol, a luxury item. I tried to decorate my space and create a comfortable home as cheaply and as tasteful as possible on my meager budget. I was not able to purchase new high quality furniture. The used furniture I received wasn't broken, but it was out of style. Dan Sauder made a point during our interview about being stuck with a particular design style. It was a point well taken as I recalled the hideous dresser with its big concealing doors and creaky drawers. The dresser lasted as long as I wanted it to, though a contemporary style ready-to-assemble computer desk I had purchased didn't make it through the next year.

Prototype:

When someone buys a mass produced product, they know that hundreds or thousands have bought the same product. All the engineering has been done and the product has been tested over and over again. Before the first product hits the shelf, a prototype is made to discover any oversight in the design. I did not worry about my bookshelf being able to hold my books since my item had been available for years. It is a similar process with artisan carpentry. A first item must be produced and tested. It is often made using less expensive material or is unfinished to represent the piece without extensive labor. The bench project had a prototype for testing and design improvements. The result was an unfinished set that was placed on the Honors House patio. The set was functional as a pair of benches, a pair of small tables, or as a single picnic table. I inspected them often and took several pictures to gain a perspective of potential uses. I dragged them

around the patio and found they were difficult to move and left behind wood dust from grinding on the brick. After a couple months of rain and weather, I had more confidence in the choice of fasteners and in the ability of the yellow pine to hold up without premature rot. I also had the opportunity to ask professors what they thought of the design and get feedback for improvements. The overall opinion was satisfaction with the product and I could not wait to get the finished product completed with more attention to aesthetics and a few minor structure changes. The prototype took about 4 hours per bench to build. It was similar to the time it took to complete the very first set for the Gutierrez family. I knew then that I had undertaken a much larger project than initially anticipated.

The shop:

At the start of this project I was crafting my carpentry projects in our garage. It was a two-car garage attached to our brick-ranch home in Anderson. We had never used the garage for our cars since it was a combined, storage unit, workshop, personal auto shop and play area for the boys. Each time I began a new project, the garage had to be organized to make room for tools and temporary tables were erected for use. When one process was complete, the entire space had to be adjusted to make room for the next. This was manageable with one set of benches and I knew that making four sets was going to be a struggle. The entire project was delayed when my wife and I decided to take advantage of the boom in housing and sell our home. We put our house on the market and had to keep our entire property in show-ready condition. This would result in the end of my carpentry messes and dust until after the sale of the house.

It was well worth the wait since our next home had a huge pole barn with an addition designed for a future shop. I recalled when my father purchased his current home.

He had a similar situation. He purchased a home with a pole barn and went to work organizing and spreading his tools for stationary use. I had a little work to do to get my space in a manageable condition but eventually cleared an area to set up my table saw, compound miter saw, material staging rack, saw horses and work table. The previous owner had left a wealth (I use that term loosely) of materials behind. I used an unfinished solid wood door as a countertop, a metal shelving unit as tool storage and hung a jobsite sodium lamp up that lit the entire barn after warming up. I found an old American flag and fished my Marine Corps flag out of storage and tacked them up as the only decoration in the space. It was more space than I ever had to build and I had no trouble filling it with the materials and parts of the benches. The problem was, the weather had turned cold and it was extremely uncomfortable to work without heat or insulation in the barn. I remembered how easy it was to assemble the bookshelf on my nice warm living room floor way back at my first apartment. It would be worth it and I pressed on with measuring, cutting and stacking.

The temperature would eventually halt my project cycle. Wood glue and paint have minimum temperatures to enable curing. Luckily, there was an attached garage on the new home that had a heater in it. With a little protesting, my wife agreed to temporarily give up the only garage her vehicle had ever been privileged to park in. This garage was the same size as the old one but did not have the piles of toys, camping gear and randomness that cluttered the old one. I was able to spread a large canvas and paint all the pieces at the same time. I took advantage of the heater and painted in a t-shirt as the temperature dropped below zero outside. Occasionally, I had to re-cut a piece in the pole barn. Each trip was motivation to one day insulate and add a furnace to the shop. My boys enjoyed me

working in the garage. They could pop their heads in the door and ask "what are you doing daddy?" or "can I help do that?" I let them help whenever possible to hopefully stir the kind of craftsman pride my father instilled in me.

Building with the boys:

It isn't the same with them as it was for me. I could run around a residential project while dad built stairs or hung doors and not bother anyone. Here they were told "be careful" and "don't touch dad's stuff." The strict safety rules imposed on projects now prevent children from being on a jobsite, much less unsupervised. The boys have loads of toys and games to play with now that are usually more interesting than watching dad use a power tool. In a way, it is the technology that has made it boring. What was hammer and nails then is a high powered nail gun now. What was a hand saw my dad would file sharp is now a circular saw with disposable blades. In the 1980s carpentry was performed using minimal power tools and now most of the processes are accomplished using a specialized electric device. The trade tools became more dangerous than just a sore thumb or abrasion. The recommended safety gear isn't designed for little people either. This project has made me realize that there is a need for a more simplified process when it comes to including my boys. When we are ready to build a new playset in the yard, I will be sharpening the teeth on my Dad's old hand saw and dusting off the old nail aprons so the boys can run around our jobsite building things with the scraps.

Intimate crafting:

Building things out of wood is unlike building with any other material. Wood dust is one of the few materials I look forward to creating in construction. When you cut wood, you create saw dust that smells fresh no matter how old the board. Even the Sauder factory

had the scent of fresh cut wood throughout its massive buildings. It is a comfort smell for me as I remember my father coming home from a long day on the job. He would come in and I would race up to get my hug at the door, the smell of sweat and fresh cut wood filling the air around him. My wife has commented that she also looked forward to that smell when I would come home from a framing job where I cut a lot of material. The grain on each piece has its own character and shape. The tree seems to show its personality with each piece having a unique pattern. The board may warp or twist as it dries and begins to form the original shape that the tree grew in. If a smoothed unfinished wood surface is wetted, it will raise the grain and become rough again. If a board is stuck in a humidifier it will become pliable like rubber and can be intentionally shaped into curves and re-dried. Each ring in a tree represents a year of life and clues are given to how the tree was stressed during that year. A rough cut leaves the tracks of the blade whether circular or linear and the paths repeat with each cycle of the blade. As the wood is sanded it gets smooth and becomes sleek in appearance. What starts as rough material that will poke and leave splinters every chance it gets, becomes a surface that begs to be caressed by caring hands. Paint coatings are sucked into the wood as if the board is still trying to supply its roots. The end grain on each board has to be double coated because of the sponge-like reaction it has. It is a material that reacts as if it is still alive though the host tree has been harvested for several days or sometimes years.

Time limitations:

I recently had to purchase a companion for my old particleboard bookcase. With a promise to one day build a real wood set, my wife and I bought another ready-to-assemble bookcase so we would have one for each side of the fireplace. The boys asked "What's in

the box?" When I told them it was another bookcase, they asked "Why don't you just build another one?" My wife laughed and said "Because we don't want to wait until next year to use it." We are continually trying to improve our home and make it more comfortable. In this effort, I usually offer to build something to fill a need or design something to serve a purpose. Unfortunately, I forget how time consuming it is to hand craft furniture and how little time I have to allocate to such an undertaking. Desire without ability is a terrible feeling. With the bookcase, I was forced to consider spending money on a piece of furniture I knew I was qualified to build better, and more beautiful. I had a shop set-up with all the tools and made a material list in my head. It would cost about the same for me to make it out of real wood. It takes me back to the theory that quality, time, and cost were all related in any project...pick only two to focus on. I had funds but was short on time and had to sacrifice quality. I was again a consumer of ready-to-assemble furniture but for different reasons. The Zen way is to let go and to give up trying to control things to perfection. I assembled that bookcase and filled it with novels and books of philosophy from my Honors courses. I eventually accepted the bookcase for its utility.

Imperfections:

With acceptance and forgiveness comes longevity and the Zen way is to exist with acceptance. If a mass produced product is opened by a consumer and is damaged, it is an outrage. Someone must compensate for the damage or refund the cost. During the factory tour, Dan mentioned a few times that the material must come out of the machine perfect or it is rejected. They used the rejects as fuel for electricity generation so even the "waste" had a purpose. With artisan carpentry, the imperfections become part of the character of the piece. Recently, I visited a furniture store that carried a selection of solid wood tables. I

noticed a set of scratches and at first, thought it was damaged. Then, I noticed another set of scratches identical to the first. It was intentionally scratched by the manufacturer to make the piece look more rustic. A similar marketing technique can be found with denim being pre-washed and distressed for a vintage look. Organic shapes and natural material patterns bring calm to most people. A walk in an older hospital with clean and bright surfaces, straight lines and repetitive patterns gives a clear example of perfection producing anxiety. In contrast, a walk through a forest where ferns, grasses and trees grow on their own terms can be a calming experience. I find it ironic that a Zen Garden is often portrayed as a meticulously manicured and exquisitely designed space exhibiting perfection. Greenery and bubbling water is not Zen, release and acceptance is Zen. The perfection is a result of the deliberate placement of symbolic parts of the space. The Zen in these spaces is the psychological state enticed by the space not the physical space alone. Imperfections and uniqueness of design is celebrated in artisan carpentry by the consumer, it is the artisan that bears the burden of perfection in the quality of the product. With mass produced products, Zen is in the purchase and use of a good without concern of its value over time. It is also found in the acceptance of the product as filling its intended purpose and nothing more.

Professional criticism:

One of the hardest things for a professional of any trade or vocation to do is to see another person's product and not critique it. As a carpenter, I often notice imperfections in woodwork at restaurants, or doors that don't shut properly. Many things go unnoticed to the untrained eye, but one that has been conditioned to notice flaws to prevent poor quality will be able to pick them out everywhere. This can be a burden if the professional is not

able to ignore the flaws and accept it for what it is. Even with ready-to-assemble furniture on display at the retailer I notice where a stock boy has rounded a screw using the wrong driver or misaligned parts while assembling. The same is true with Artisans. About the time I had finished the benches it was New Years' Eve. I decided it would be the first test of the durability and placed the benches around the garage. I had a projector and brought a stereo, disco lights and a large rug out to the garage and set up a game room/dance hall for the boys. My wife and I invited several friends and family members over to show our house and have a party for all the kids. The party was a big success and one of the attendees was my uncle-in-law. He is also from a long line of trade carpenters and is honestly a much more experienced and skilled carpenter than me. It was a chance for me to connect with him about carpentry and show my design skill. He liked the design and appreciated the engineering needed to produce a convertible bench. He did point out some things that could have been improved and was merciful in his critique. It was as though I had been given a blue ribbon in a competition. I was verified by a senior craftsman and felt more confident about putting my product out for hundreds of students to use and critique over the next several years.

Conclusion:

There is a distinct connection between an Artisan and the product being crafted. A focus and attention to detail is a result of personal pride in the work and not the efficiency of production. With mass-produced products, there is disconnection between the assembly worker and the object being created. Since each worker is only responsible for a small task in repetition it becomes a matter of efficiency and not necessarily pride in the product. The same is apparent in the consumer. A consumer buying a product that is mass produced

accepts it for its utilitarian purpose and is more concerned with cost. A buyer of Artisan goods is more concerned with the design and quality than with the cost. The hand crafted product may not have to serve a purpose greater than to be appreciated as a work of art. Each product has purpose in its market and is created with its end user in mind. There is an aspect of Zen in each product whether it is in the selection or appreciation of it. Mass production demands perfection and it is the imperfections of Artisan pieces that make them great.

Citations:

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Hoover, Thomas. *Zen Culture*, Random House. 2010. Kindle Ed.

Wilson, Frank R. *The Hand*, New York: Random House. 1999. Print.

Appendix 1

Artist's statement

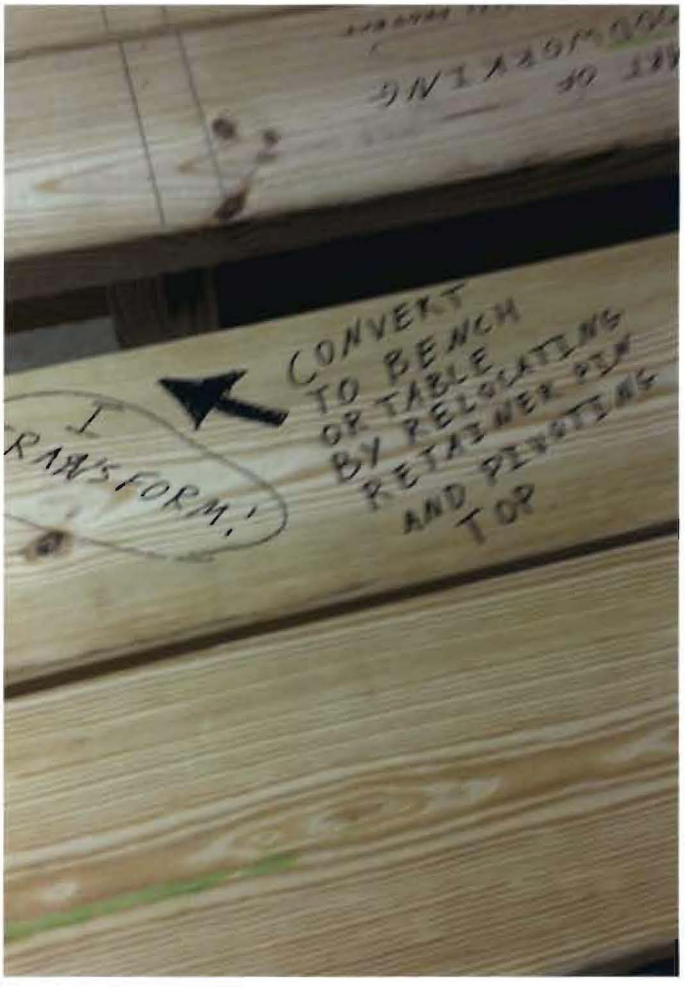
The bench sets were designed to convert into a single picnic table or individual tables. This design is a result of careful planning to make a functional and comfortable, long-lasting product. Great care was taken in the selection of individual boards and in cutting material for the best strength possible. The entire process, including material selection, purchase, work space preparation, component fabrication, assembly, finishing and final installation was documented as a personal experience. The goal was to provide a unique and custom product for the Honors House to utilize for years to come. The materials and fasteners were chosen to resist weather and outdoor exposure. The materials include; southern yellow pine wood, zinc coated steel fasteners, outdoor quality construction adhesive, and outdoor grade paint coatings. The paint was selected to match the white exterior of the Honors House at the time of installation.

Appendix 2

Basis of design pictures

Appendix 3

Prototype pictures


CONVERT
TO BENCH
OR TABLE
BY RELOCATING
RETAINER PIN
AND PIVOTING
TOP


PLEASE USE FREELY
AND COMMENT BY WRITING
DIRECTLY ON WOOD SURFACE

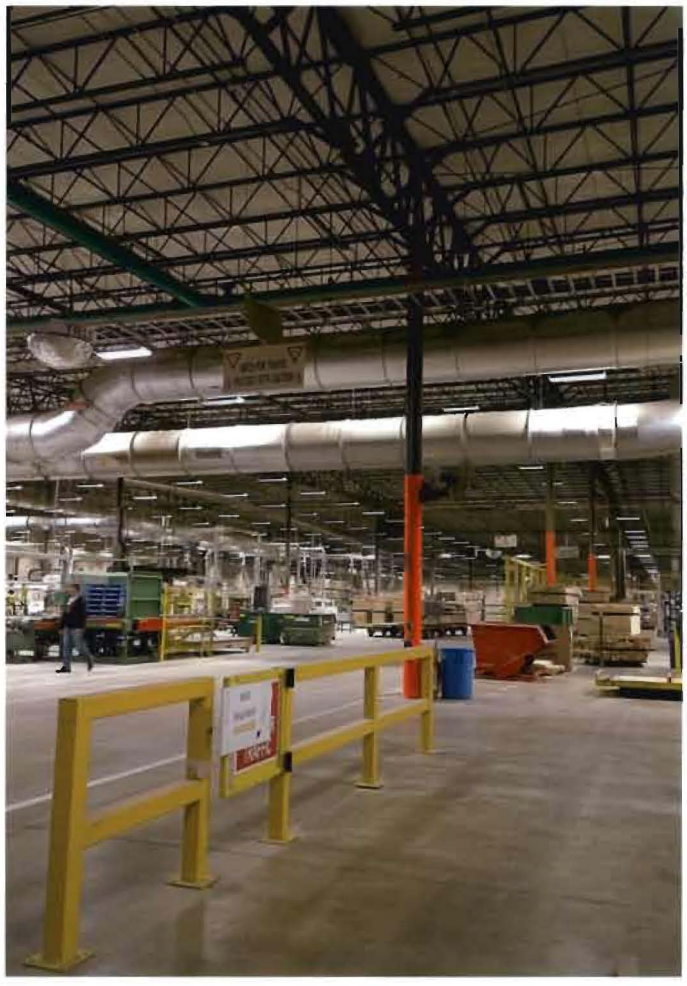
Appendix 4

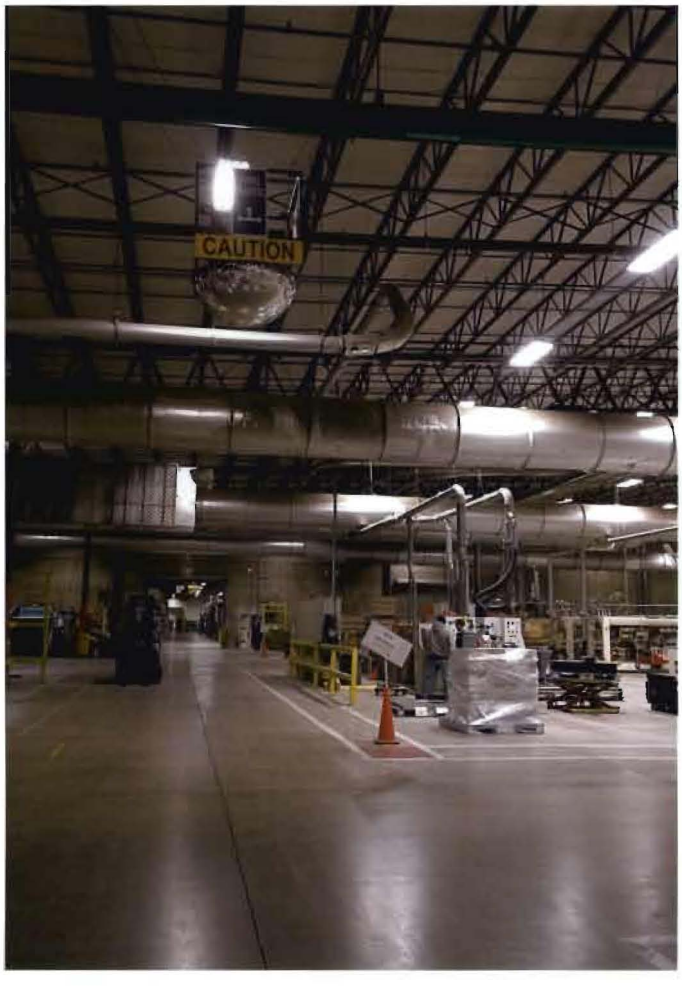
Final build pictures

Appendix 5

Sauder Woodworking pictures


SAUDER WOODWORKING

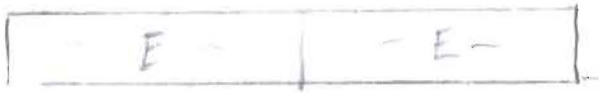


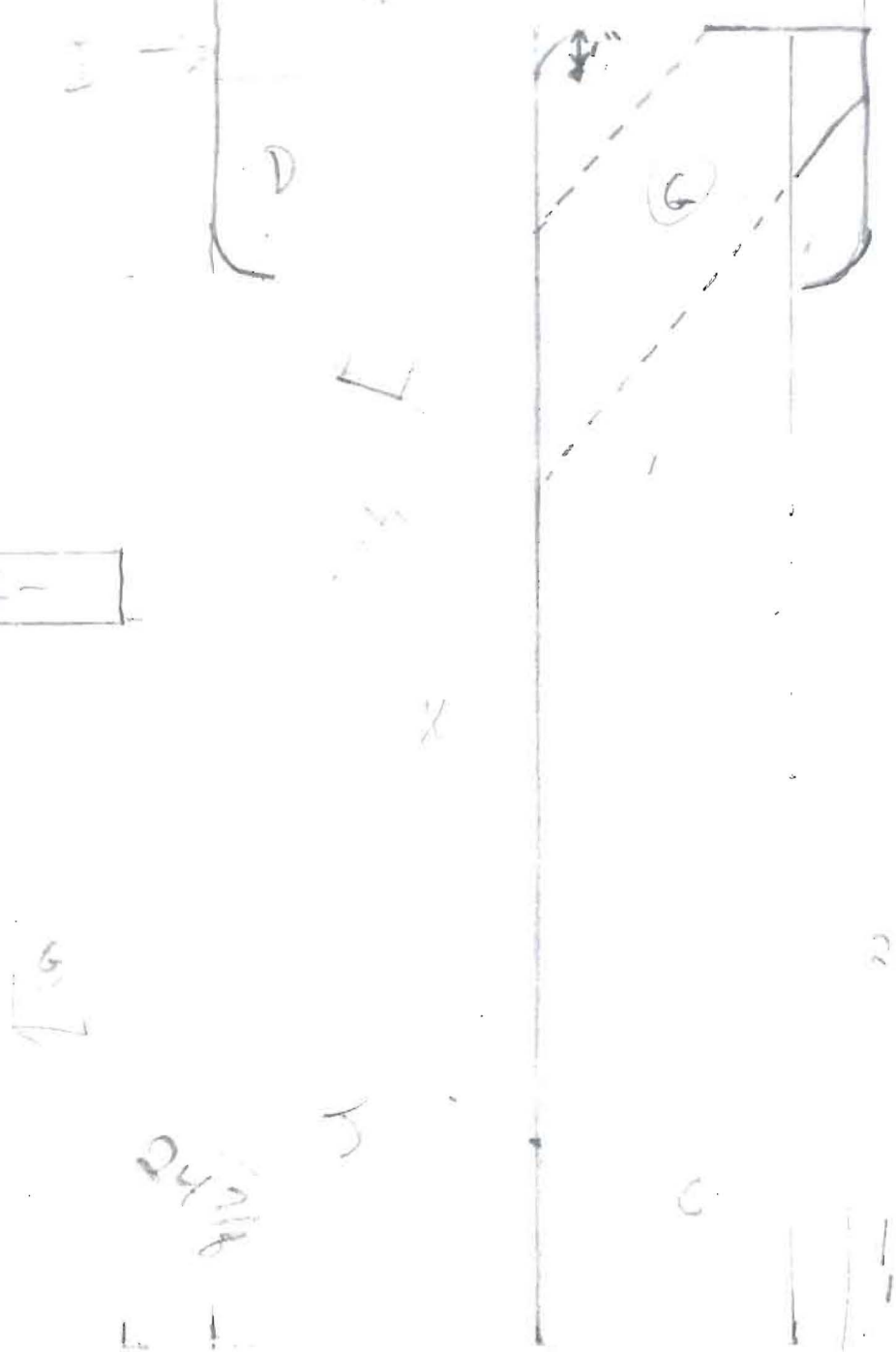

CAUTION


IMA

Appendix 6

Convertible bench plans



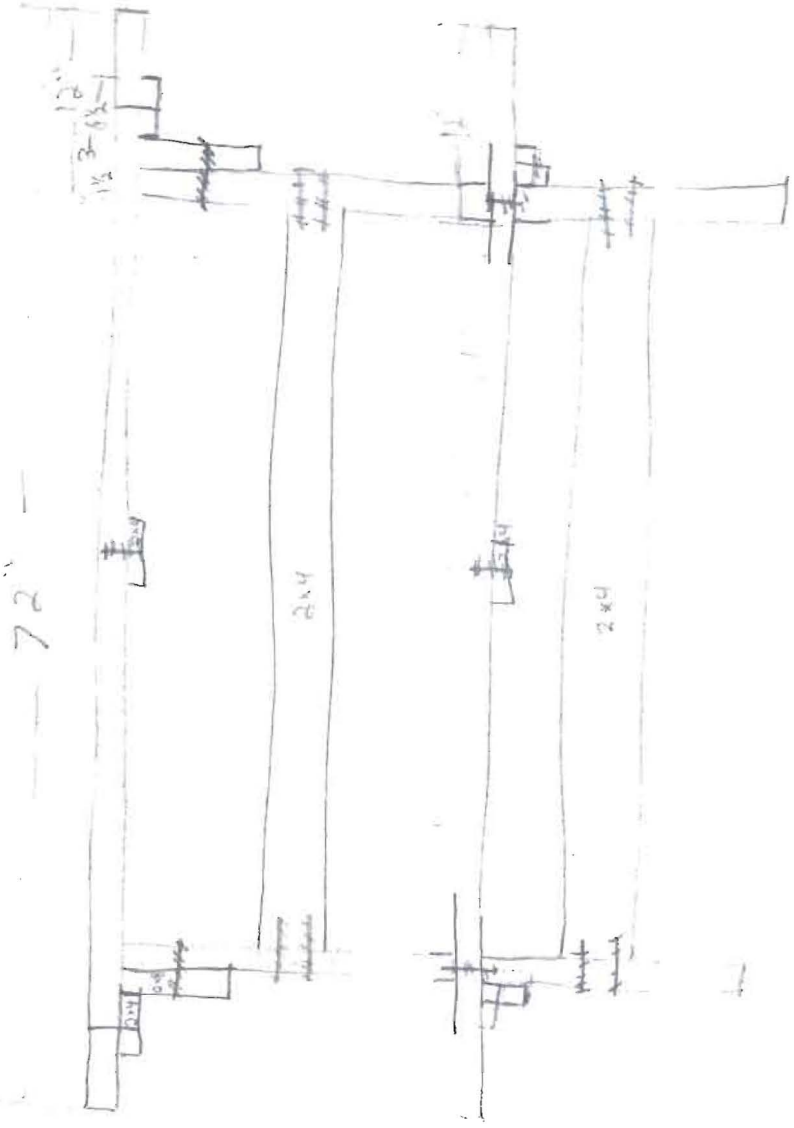


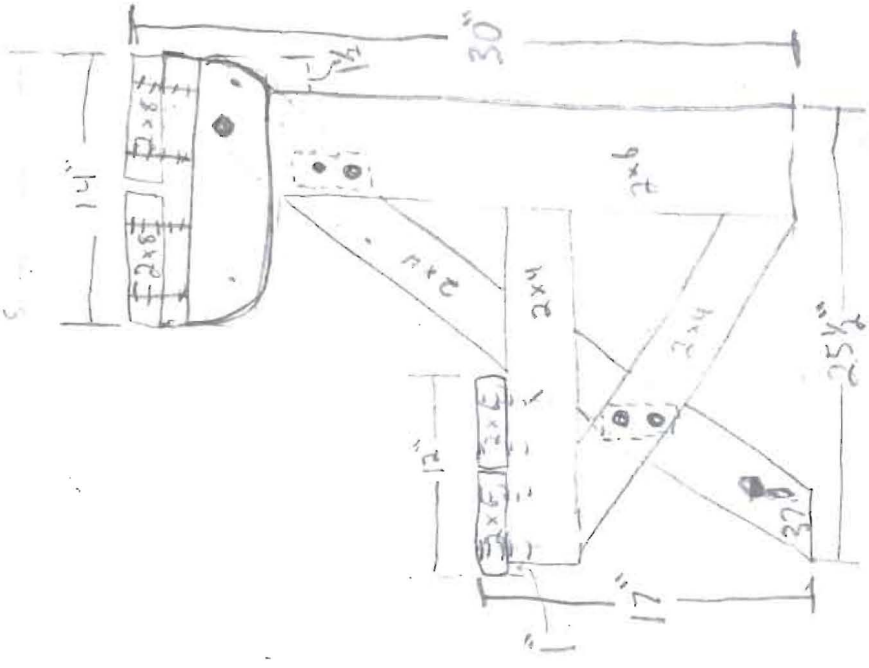
A 24" ×2

C 29" ×2
D 14" ×2
E 72" ×2

H 40" ×2
I 14" ×3
J ×2
K 16" ×2

3-12" 2×4
3-12" 2×6


72"
2x4
2x4


30"
14"
2x6
2x6
2x4
2x4
2x4
25½"
12"
2x6
2x6
32"
17"

Hold on a Second:
Social media and the resurgence of documenting one's life

An Honors Thesis (HONR 499)

By

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Thesis Advisor

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Signed

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May 2015

Expected Date of Graduation
May 2015